

# Nicholas Kathios

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## EDUCATION

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**Northeastern University**, College of Science, Boston, MA, Expected May 2026  
PhD in Psychology with a concentration in Cognitive Neuroscience  
Advisor: Dr. Psyche Loui

**Columbia University**, Columbia College, New York, NY, May 2021  
Bachelor of Arts in Psychology & Music, *summa cum laude* | Phi Beta Kappa  
Advisors: Drs. Nim Tottenham and Mariam Aly

## RESEARCH EXPERIENCE

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**Music, Imaging, and Neural Dynamics Lab**, Northeastern University, Boston, MA  
*PhD Student*, September 2021 - Present  
Principal Investigator: Psyche Loui

**Developmental Affective Neuroscience Lab**, Columbia University, New York, NY  
*Honors Undergraduate Research Assistant*, September 2018 - August 2021  
Principal Investigator: Nim Tottenham

**Cortner Lab**, Teachers College, Columbia University, New York, NY  
*Undergraduate Research Intern*, January 2018 - May 2018  
Principal Investigator: James Corter

## TEACHING EXPERIENCE

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**Northeastern University Department of Psychology**, Boston, MA  
*Graduate Teaching Assistant*, Fall 2022-Present  
Laboratory in Cognition, Instructor: Cole Eidson, Fall 2022

**Columbia University Department of Psychology**, New York, NY  
*Undergraduate Teaching Assistant*, Fall 2019 - May 2021  
Science of Psychology, Instructor: Patricia Lindemann, Fall 2019, Spring 2020, Fall 2020 (online), Spring 2021 (online)  
Science of Psychology, Instructor: Tina Kao, Summer 2020 (online)

**Columbia University Musical Mentors Collaborative**, New York, NY  
*Trumpet Instructor*, September 2017 - May 2021

**Private Instrumental Instruction Studio**, Pelham, NH  
*Trumpet & French Horn Instructor*, September 2014 - May 2021

## PUBLICATIONS

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Kathios, N., & Loui, P. (2022). Musical Enculturation in the Social Coevolution of Emotions. *Evolutionary Studies in Imaginative Culture*. 6(1), 33-37.

## PEER-REVIEWED MANUSCRIPTS

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Bloom, P. A., Bartlett, E., Kathios, N., Algharazi, S., Siegelman, M., Shen, F., DiMaggio-Potter, M., Beresford, L., Singh, A., Tottenham, N., & Aly, M. (Stage 1 protocol accepted in principle). Stage 1 Registered Report Manuscript: Effects of familiar music exposure on deliberate retrieval of remote episodic and semantic memories in healthy aging adults. *Memory*. <https://psyarxiv.com/tejb4/>

## PREPRINTS

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Kathios, N.\*, Sachs, M. E.\*, Zhang, E., Ou, Y., & Loui, P. (2022). Generating New Musical Preferences from Hierarchical Mapping of Predictions to Reward. *BioRxiv*, 2022.06.17.496615. <https://doi.org/10.1101/2022.06.17.496615> (\*These authors share first authorship)

## IN PREP

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Kathios, N., Patel, A., Loui, P. (In Prep). Individual with Specific Musical Anhedonia Show Blunted Pleasure to Nonmusical Sounds.

Kathios, N., Bloom, P. A., Singh, A., Bartlett, E., Algharazi, S., Siegelman, M., Shen, F., Beresford, L., DiMaggio-Potter, M., Bennett, S., Natarajan, N., Ou, Y., Loui, P., Aly, M.\*, Tottenham, A.\* (In Prep). Spontaneous music-evoked memories in cognitively healthy older adults: Associations between emotion, familiarity, and memory across familiar and unfamiliar music. (\*These authors share senior authorship).

## PRESENTATIONS

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- Kathios, N.,** Patel, A., Loui, P. (August 2022). *Individuals with Specific Musical Anhedonia Show Blunted Pleasure to Nonmusical Sounds*. Oral presentation at the Society of Music Perception and Cognition Annual Meeting.
- Kathios, N.\*,** Sachs, M.\*, Zhang, E., Loui, P. (August 2022). *From Prediction to Reward: Individual Differences in Reward Learning*. Oral presentation at the Society of Music Perception and Cognition Annual Meeting.
- Kathios, N.,** Quinci, M., Loui, P. (April 2022). *When You Heard It First: Age of Exposure Affects Functional Connectivity Between Auditory and Reward Networks*. Poster presented at the Cognitive Neuroscience Society Annual Meeting.
- Kathios, N.,** Bloom, P. A., Bartlett, E., Algharazi, S., Aly, M., Tottenham, N. (November 2021). *Self-Reported Emotion Valence Evoked by Popular Music in Healthy Aging*. Poster presented at the International Conference of Students of Systematic Musicology.
- Kathios, N.,** Bloom, P. A., Bartlett, E., Algharazi, S., Tottenham, N., and Aly, M. (April 2021). *Popular Music & Self-Reported Emotion Valence*. Poster presented at Columbia University's Psychology Symposium.

## GRANTS, HONORS, & AWARDS

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- Society for Music Perception and Cognition - Student Research Award, 2022
- Northeastern University PhD Network Travel Funding (\$500) - Summer 2022
- Columbia University's Psychology Symposium - Best Session B Poster Award, 2021
- Columbia University Honors Psychology Program, 2019 - 2021
- Columbia Center for Career and Education Summer Funding (\$4000), Summer 2019, Summer 2020

## RESEARCH SKILLS

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- Online Behavioral Research: Amazon Mechanical Turk, Qualtrics, Prolific, Gorilla
- Coding Languages: R (advanced), MATLAB (intermediate), Python (beginner), Git (beginner)
- Natural Language Processing (NLP) in Python
- Music-Information Retrieval using MIRToolbox in MATLAB
- Statistics: Bayesian model construction and null hypothesis testing
- Audio Editing: Audacity, GarageBand
- Autobiographical Memory Interview Administration and Scoring
- Neuroimaging: Statistical Parametric Mapping, CONN Toolbox

## MEMBERSHIPS

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- Cognitive Neuroscience Society (January 2022 - Present)
- Auditory Perception and Cognition Society (November 2020 - Present)
- Society for Music Perception and Cognition (August 2020 - Present)
- Columbia University Neuroscience Society (September 2017 - May 2021)

## OUTREACH

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### **Northeastern University Community Liaisons for Education Using STEM (NUCLEUS)**

*General Body Member, External Organizer, September 2021 - Present*

### **Zuckerman Institute BRAINYAC Program**

*Research Mentor, Summer 2021*

### **Columbia University Musical Mentors Collaborative**

*Executive Board Member, President, September 2018 - May 2021*

Oversaw and developed programs that provided students a local elementary school with free instruments, music lessons, and workshops

## OUTREACH TALKS

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*Memories Evoked by Familiar and Unfamiliar Music*. NUCLEUS Thesis Pieces Presentation at Norwood High School (Virtual).

December 3, 2021

*Music, Memory, and Emotion*. Invited talk at Alvirne High School. Hudson, NH. December 1, 2021.

*How Does Music Evoke Memories?* Invited talk at Alvirne High School. Hudson, NH. May 21, 2021.

## MENTORSHIP

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Odessa Deng, Harvard Undergraduate Thesis Student, Spring 2022-Present

Application Statement Feedback Program (ASFP) Statement Editor, Fall 2021

Kaila Roberts-Benoit, BRAINYAC High School Fellow, Summer 2021 (co-mentor)

Naomi De Lashmutt, BRAINYAC High School Fellow, Summer 2021 (co-mentor)